



# Project Report December 8, 2006

**Strategic Plan Objectives:** Provide fish for Tribal resource management.

37 projects found

13215-A-009 - <a href="#">Outreach Activities - The Columbia George Information/Education Program</a>	
<b>Facility</b>	Carson National Fish Hatchery
<b>Expended</b>	\$0
<b>Objective</b>	Provide fish for Tribal resource management.
<b>Primary Benefited Species</b>	Chinook salmon or king salmon ( <a href="#">Oncorhynchus tshawytscha</a> )
<b>Primary Benefited Population</b>	<a href="#">Wind River spring Chinook</a>
<b>Plans</b>	Carson NFH Spring Chinook Salmon Hatchery and Genetic Management Plan
<b>Keyword</b>	Outreach
<b>Need Number</b>	N-002
<b>Partners</b>	National Oceanic and Atmospheric Administration, Fisheries (\$15000)
<b>Accomplishments</b>	
Number of visitors to service facilities.	2800
<p><b>Accomplishment Summary</b></p> <p>Personal services provided to general public and educational groups on and off-site. Non-personal contacts through displays, brochures and self-guided tours approx. 10,000/yr.</p> <p><b>Description</b></p> <p><b>Further description:</b></p> <p>The Columbia Gorge Information/Education (I/E) program services Carson and Spring Creek NFH's and the Lower Columbia Fish Health Center. I/E provides FWS fishery program information and support by means of tours, formal programs, special events, hatchery project support, creating and maintaining a website, temporary and permanent displays, brochures/leaflets, and interagency coordination for outreach and educational initiatives in the local communities. The environmental education program provides salmon education to nearly all Washington 4th grade classrooms in the mid-Columbia region. I/E staff provide teacher workshops, coordinate with state, Federal, and Tribal agencies to develop education and outreach programs for area students on and off site; attend several relevant trainings/workshops annually to improve outreach skills and present the latest information on natural, cultural, and historical resources. In addition, Carson NFH and I&amp;E staff presented the Links to the Sea educational miniature golf course at several</p>	

	venues including the Clark County Home and Garden Show and the Salmon Summit in Richland, WA.
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13280-A-001 - [Support of the coho salmon mitigation program in the Snake River basin.](#)

<b>Facility</b>	Eagle Creek National Fish Hatchery	<p><b>Accomplishment Summary</b></p> <p>The hatchery provided 552,214 eyed coho salmon eggs to the Nez Perce Indian Tribe in FY 2006, to help meet the coho salmon mitigation goal for the Snake River sub-basin of the Columbia River basin. This year the Tribe requested eyed eggs from earlier spawning adults.</p> <p><b>Description</b></p> <p><b>Further description:</b></p> <p>The mitigation for lost coho salmon stocks in the Snake River basin as a result of main-stem Columbia River and Snake River Dams, as initiated by the Nez Perce Indian Tribe, incorporates three approaches. The first involves the release of 550,000 yearling pre-smolts reared at the Eagle Creek National Fish Hatchery and trucked to two release sites in the Clearwater River basin. The second involves the trapping and spawning of returning coho salmon adults for local incubation and rearing. The third, when needed, involves the transfer of up to 600,000 eyed eggs from the Eagle Creek National Fish Hatchery for local incubation and on-site rearing of coho salmon for release as yearling smolts. In FY 2006 the Eagle Creek National Fish Hatchery provided 552,214 eyed eggs to the tribe to assist in meeting their coho salmon egg goal.</p>					
<b>Expended</b>	\$2500						
<b>Objective</b>	Provide fish for Tribal resource management.						
<b>Primary Benefited Species</b>	Coho salmon or silver salmon ( <a href="#">Oncorhynchus kisutch</a> )						
<b>Primary Benefited Population</b>	Not specified						
<b>Plans</b>	Eagle Creek NFH Coho Salmon Hatchery and Genetic Management Plan The Service's Native American Policy U. S. vs OR Columbia River Fishery Management Plan (under renegotiation)						
<b>Keyword</b>	Mitigation						
<b>Need Number</b>	N-002						
<b>Partners</b>	Idaho Department of Fish and Game National Marine Fisheries Service Nez Perce Tribe						
<p><b>Accomplishments</b></p> <table border="1"> <tr> <td>Recovery Plan production tasks implemented (PART)</td> <td>1</td> </tr> <tr> <td>Number of other Recovery Plan tasks implemented for T&amp;E populations</td> <td>1</td> </tr> <tr> <td>Number of other Fishery Management Plan</td> <td>1</td> </tr> </table>			Recovery Plan production tasks implemented (PART)	1	Number of other Recovery Plan tasks implemented for T&E populations	1	Number of other Fishery Management Plan
Recovery Plan production tasks implemented (PART)	1						
Number of other Recovery Plan tasks implemented for T&E populations	1						
Number of other Fishery Management Plan	1						

tasks implemented for populations of management concern.	
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13280-A-019 - [Support of coho salmon mitigation in the Clearwater River, Snake River basin](#)

<b>Facility</b>	Eagle Creek National Fish Hatchery	<p><b>Accomplishment Summary</b></p> <p>The Eagle Creek National Fish Hatchery provided 506,000 coho salmon smolts to meet the Nez Perce Tribe's coho salmon production goal in the Clearwater River basin.</p> <p><b>Description</b></p> <p><b>Further description:</b></p> <p>This project involves the annual production of coho salmon smolts at the Eagle Creek NFH for transport to release sites on tributaries of the Clearwater River in Idaho. The adults returning from these releases will provide a future egg bank for continuing coho production plans in concert with the Nez Perce Tribe. These fish are part of a mitigation effort due to the construction of main stem Columbia River and Snake River dams</p>			
<b>Expended</b>	\$141200				
<b>Objective</b>	Provide fish for Tribal resource management.				
<b>Primary Benefited Species</b>	Coho salmon or silver salmon ( <a href="#">Oncorhynchus kisutch</a> )				
<b>Primary Benefited Population</b>	<a href="#">Clearwater River Coho</a>				
<b>Plans</b>	Eagle Creek NFH Coho Salmon Hatchery and Genetic Management Plan The Service's Native American Policy U. S. vs OR Columbia River Fishery Management Plan (under renegotiation)				
<b>Keyword</b>	Tribal				
<b>Need Number</b>	N-002				
<b>Partners</b>	Idaho Department of Fish and Game National Marine Fisheries Service Nez Perce Tribe				
<p><b>Accomplishments</b></p> <table border="1"> <tr> <td>Recovery Plan production tasks implemented (PART)</td> <td>1</td> </tr> <tr> <td>Number of other Fishery Management Plan tasks implemented for populations of management concern.</td> <td>3</td> </tr> </table>			Recovery Plan production tasks implemented (PART)	1	Number of other Fishery Management Plan tasks implemented for populations of management concern.
Recovery Plan production tasks implemented (PART)	1				
Number of other Fishery Management Plan tasks implemented for populations of management concern.	3				

13280-A-021 - [Support of coho salmon mitigation in the Yakima River, Columbia River Basin](#)

<b>Facility</b>	Eagle Creek National Fish Hatchery	<p><b>Accomplishment Summary</b></p> <p>The Eagle Creek National Fish Hatchery provided 457,440 coho salmon yearlings for acclimation in the Yakima River Basin to assist the Yakama Nation in meeting their restoration goal for the Yakima River.</p> <p><b>Description</b></p> <p><b>Further description:</b></p> <p>This project involves the rearing of coho salmon to pre-smolt yearlings prior to their transfer to acclimation ponds in the Yakima River Basin. A total of 389,440 coho were transferred to acclimation sites on the Natches River, a tributary of the Yakima River. An additional 68,000 coho were transferred to rearing ponds at Prosser, Washington on the lower Yakima River. The adults returning from these releases will provide a future brood stock source to meet the Yakama Nation's fishery management goal in the Yakima River system. These fish are part of the mitigation effort resulting from the construction of dams on the main stem Columbia River.</p>	
<b>Expended</b>	\$134500		
<b>Objective</b>	Provide fish for Tribal resource management.		
<b>Primary Benefited Species</b>	Coho salmon or silver salmon ( <a href="#">Oncorhynchus kisutch</a> )		
<b>Primary Benefited Population</b>	Not specified		
<b>Plans</b>	Eagle Creek NFH Coho Salmon Hatchery and Genetic Management Plan Yakima Subbasin Plan U. S. vs OR Columbia River Fishery Management Plan (under renegotiation)		
<b>Keyword</b>	Mitigation		
<b>Need Number</b>	N-002		
<b>Partners</b>	National Marine Fisheries Service Yakama Indian Nation		
<p><b>Accomplishments</b></p> <table border="1"> <tr> <td>Recovery Plan production tasks implemented (PART)</td> <td>1</td> </tr> </table>			Recovery Plan production tasks implemented (PART)
Recovery Plan production tasks implemented (PART)	1		

13280-A-022 - [Yakima River Coho Egg Program](#)

<b>Facility</b>	Eagle Creek National Fish Hatchery	<p><b>Accomplishment Summary</b></p> <p>The Eagle Creek National Fish Hatchery provided 100,000 eyed eggs from late spawning coho salmon to assist the Yakama Nation in establishing a self-sustaining brood stock population in the Yakima River.</p> <p><b>Description</b></p> <p><b>Further description:</b></p> <p>In concert with the Yakama Tribal Fisheries Program, the Eagle Creek National Fish Hatchery provided the Tribe with 100,000 eye coho salmon eggs from the last egg spawning date. The Tribe's coho re-establishment program in the Yakima River is now directed towards a later spawning stock when sufficient quality water is available in the river for coho salmon tolerance.</p>	
<b>Expended</b>	\$500		
<b>Objective</b>	Provide fish for Tribal resource management.		
<b>Primary Benefited Species</b>	Coho salmon or silver salmon ( <a href="#">Oncorhynchus kisutch</a> )		
<b>Primary Benefited Population</b>	Not specified		
<b>Plans</b>	Eagle Creek NFH Coho Salmon Hatchery and Genetic Management Plan		
<b>Keyword</b>	Tribal		
<b>Need Number</b>	N-002		
<b>Partners</b>	National Marine Fisheries Service Yakama Indian Nation		
<p><b>Accomplishments</b></p> <table border="1"> <tr> <td>Recovery Plan production tasks implemented (PART)</td> <td>1</td> </tr> </table>			Recovery Plan production tasks implemented (PART)
Recovery Plan production tasks implemented (PART)	1		

14235-A-008 - [Improve Passage of Listed Species at the Kooskia National Fish Hatchery Weir](#)

<b>Facility</b>	Kooskia National Fish Hatchery
<b>Expended</b>	\$23312
<b>Objective</b>	Restore declining fish and other aquatic resource populations before they require listing under the Endangered Species Act.
<b>Primary Benefited Species</b>	Rainbow trout ( <a href="#">Oncorhynchus mykiss</a> )
<b>Primary Benefited Population</b>	Not specified
<b>Plans</b>	Kooskia National Fish Hatchery HGMP
<b>Keyword</b>	Fish Passage
<b>Need Number</b>	N-002
<b>Partners</b>	

**Accomplishments**

Number of applied science and technology tasks implemented as prescribed by Fishery Management Plans. (PART)	1
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**Accomplishment Summary**

Completed annual monitoring and evaluation to measure the effect the Kooskia NFH weir has on targeted species, resident fish, and ESA listed steelhead and bull trout.

**Description**

**The importance to the Resource:**

This project will develop an operations plan to allow passage of ESA listed fish at the permanent fish weir at Kooskia NFH, minimizing take of these species. Wild summer steelhead and bull trout in Clear Creek are listed as threatened under the ESA.

**The problem:**

The Service's BiOp regarding the construction and operation of the weir stated that the weir, may adversely affect but is not likely to jeopardize the continued existence of the Columbia Basin DPS of bull trout and that adult and sub-adult migrating bull trout could be taken as a result of this proposed action.

**The objective:**

Data collected by this project will: 1) Determine the timing and frequency of ESA listed fish encounters, 2) provide for an operations plan that will minimize the incidental take of ESA listed species, and 3) optimize broodstock collection for the hatchery.

**Further description:**

14235-A-012 - [Improving Kooskia NFH evaluation and long term monitoring of listed species](#)

<b>Facility</b>	Kooskia National Fish Hatchery
<b>Expended</b>	\$14164
<b>Objective</b>	Restore declining fish and other aquatic resource populations before they require listing under the Endangered Species Act.
<b>Primary Benefited Species</b>	Chinook salmon or king salmon ( <a href="#">Oncorhynchus tshawytscha</a> )
<b>Primary Benefited Population</b>	<a href="#">Clearwater River Lower Mainstem Tributaries</a>
<b>Plans</b>	Kooskia National Fish Hatchery HGMP
<b>Keyword</b>	Fish Passage
<b>Need Number</b>	N-002
<b>Partners</b>	

**Accomplishments**

Number of applied science and technology tasks implemented as prescribed by Fishery Management Plans. (PART)	1
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**Accomplishment Summary**

Completed collecting information on numbers and sizes of juvenile steelhead and bull trout in the adult fish trap at the Kooskia NFH weir.

**Description**

**The importance to the Resource:**

Under Incidental Take, the NMFS lists two specific RPMs for agencies operating artificial production programs: monitoring and evaluating their programs, and reducing potential negative impacts to listed Chinook and steelhead.

**The problem:**

In the NMFS Biological Opinion on Artificial Propagation in the Columbia River Basin, operation of weirs for the collection of broodstock is listed as one potential effect on listed species.

**The objective:**

Implement a monitoring and evaluation plan to measure the effectiveness of the Kooskia NFH SCS program, allowing for adaptive management and optimizing production while minimizing the impacts to ESA listed stocks. Data on the numbers, sizes, and migration timing of bull trout and wild summer steelhead will be compiled in the weir and adult pond

**The method:**

These data will be used for comparison with data collected by the Idaho Fishery Resource Office on the numbers, sizes, and status of bull trout and wild summer steelhead populations residing in the upper reaches of Clear Creek. These comparisons will be used to assess and

	evaluate the effects of the weir operation on these listed populations.
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13231-A-006 - [Fish Health Inspections and Certifications](#)

<b>Facility</b>	Lower Columbia River Fish Health Center	<b>Accomplishment Summary</b>  Twenty-eight stocks of salmon and other fish used to fulfill mitigation and restoration plans in the Columbia River Basin were monitored for health, inspected for disease, and certified as fit and healthy for release.
<b>Expended</b>	\$338629	
<b>Objective</b>	Meet the Service's responsibilities for mitigating fisheries.	
<b>Primary Benefited Species</b>	Chinook salmon or king salmon ( <a href="#">Oncorhynchus tshawytscha</a> )	
<b>Primary Benefited Population</b>	<a href="#">White Salmon River fall run (tule) Chinook</a>	
<b>Plans</b>	<p>U.S. Fish and Wildlife Service National Aquatic Animal Health Policy</p> <p>Carson NFH Spring Chinook Salmon Hatchery and Genetic Management Plan</p> <p>Spring Creek NFH Hatchery and Genetic Management Plan</p> <p>Little White NFH Spring Chinook Salmon Hatchery and Genetic Management Plan</p> <p>Little White NFH Upriver Bright Fall Chinook Salmon Hatchery and Genetics Management Plan</p> <p>1999 NMFS Biological Opinion on Artificial Propagation in the Columbia River Basin.</p> <p>Warm Springs Hatchery and Genetic Management Plan (draft)</p> <p>Eagle Creek NFH Coho Salmon Hatchery and Genetic Management Plan</p>	<b>Description</b>
		<b>The importance to the Resource:</b>
		The fish at 6 National Fish Hatcheries and Abernathy Fish Technical Ctr. are regularly examined throughout their life cycle to ensure that healthy fish, meeting the requirements of National, State, and Tribal Fish Health Policies, are produced and released in the lower Columbia River Basin.
		<b>The problem:</b>
		Disease outbreaks reduce viability and survival of hatchery fish. The fish from these hatcheries are critical to help overcome the impaired habitat and obstruction from dams, and to allow harvest in the Columbia River Basin and ocean fisheries; unhealthy fish do not survive.
		<b>The objective:</b>
		Regular exams at each hatchery provides information necessary to manipulate the environmental/cultural conditions to maintain healthy fish and to avoid losses due to disease. We also provide technical and certification/diagnostic services to tribal, federal, state, and private biologists to improve health and conserve fish resources in the NW.
		<b>The method:</b>
		The Lower Columbia River Fish Health Ctr. uses veterinary technology to monitor health

	Eagle Creek NFH Winter Steelhead Hatchery and Genetic Management Plan				
<b>Keyword</b>	Fish Health				
<b>Need Number</b>	N-002				
<b>Partners</b>	National Oceanic and Atmospheric Administration, Fisheries				
<b>Accomplishments</b>					
Number of post-stocking survival tasks met, as prescribed by Recovery plans for hatchery propagated listed species. (PART)		6			
Number of other Recovery Plan tasks implemented for T&E populations		9			
Number of Fishery Management Plan production tasks implemented (PART)		1			
Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation		1			
Number of applied aquatic scientific and technologic tools shared with partners.		1			
Number of techniques and culture technology tools developed.		1			
Number of applied science and technology tasks implemented as prescribed by Fishery Management Plans. (PART)		2			
					and prevent disease in 5 salmon species, lamprey, steelhead and sturgeon. In FY2006, we conducted 220 exams on over 7000 fish at the hatcheries to monitor, inspect and certify the health of 16,500 adult fish and over 35 million juveniles.
					<b>Further description:</b>
					The fish at 6 National Fish Hatcheries and Abernathy Fish Technical Ctr. are regularly examined throughout their life cycle to ensure that healthy fish, meeting the requirements of National, State, and Tribal Fish Health Policies, are produced and released. The fish from these hatcheries are critical to help overcome the impaired habitat and obstruction from dams, and to allow harvest in the Columbia River Basin and ocean fisheries; unhealthy fish do not survive. The Lower Columbia River Fish Health Ctr. uses veterinary technology to monitor health and prevent disease in 5 salmon species, lamprey, steelhead and sturgeon. Regular exams at each hatchery provides information necessary to manipulate the environmental/cultural conditions to maintain healthy fish and to avoid losses due to disease. In FY2006, we conducted 220 exams on over 7000 fish at the hatcheries to monitor, inspect and certify the health of 16,500 adult fish and over 35 million juveniles. We also provided technical assistance for tribal, federal, and state biologists and certification/diagnostic services to private aquaculture facilities, all to conserve aquatic resources through improved fish health. Mitchell Act funding from NOAA helps support this work.

**13231-A-009 - [Umatilla Tribal Salmon Supplementation: Fish Health Monitoring and Certification](#)**

<b>Facility</b>	Lower Columbia River Fish Health Center	<p><b>Accomplishment Summary</b></p> <p>Certified health of 395,000 salmon destined for the supplementation and restoration programs in the Umatilla Basin for the Confederated Tribes of the Umatilla Indian Reservation.</p> <p><b>Description</b></p> <p><b>The importance to the Resource:</b></p> <p>Water management issues and over-harvesting decimated populations of salmon in the Umatilla Basin of Eastern Oregon. The Confederated Tribes of Umatilla undertook a supplementation program to reestablish the salmon runs by using stocks from the Columbia River National Fish Hatcheries.</p> <p><b>The problem:</b></p> <p>Because this program involves inter-basin transfers of fish, health officials of Washington, Oregon and US Fish &amp; Wildlife Service require that all fish be certified in order to establish healthy, viable stocks able to survive and return to the Umatilla Basin.</p> <p><b>The objective:</b></p> <p>By originally using fish from the Lower Columbia River Hatcheries and mitigating for irrigation, the Umatilla Tribe re-established a run of salmon to the desert. Lacking space to rear all returnees, additional supplementation was achieved by rearing eggs from the successful Umatilla R. returns at the Little White Salmon NFH.</p> <p><b>The method:</b></p> <p>The Umatilla stock of spring Chinook are reared at the Little White Salmon NFH. Fish</p>
<b>Expended</b>	\$12135	
<b>Objective</b>	Provide fish for Tribal resource management.	
<b>Primary Benefited Species</b>	Chinook salmon or king salmon ( <a href="#">Oncorhynchus tshawytscha</a> )	
<b>Primary Benefited Population</b>	<a href="#">Umatilla River Spring Chinook</a>	
<b>Plans</b>	<p>U.S. Fish and Wildlife Service National Aquatic Animal Health Policy</p> <p>Conservation of Columbia Basin Fish, Final Basinwide Salmon Recovery Strategy, 12/2000 (All H Paper)</p> <p>1999 NMFS Biological Opinion on Artificial Propagation in the Columbia River Basin.</p> <p>Little White NFH Spring Chinook Salmon Hatchery and Genetic Management Plan</p> <p>A Research Plan for the Fishery Resources of the Wind River Indian Reservation</p> <p>2000 NMFS FCRPS Biological Opinion - December 21, 2000</p>	
<b>Keyword</b>	Fish Health	
<b>Need Number</b>	N-002	

<p><b>Partners</b></p>	<p>Bonneville Power Administration Confederated Tribes of the Umatilla Indian Reservation Oregon Department of Fish and Wildlife</p>	<p>health personnel regularly examine the fish using clinical and veterinary technology. Healthy juvenile salmon are returned to the Umatilla Basin for acclimation prior to their outmigration to the ocean.</p>
<p><b>Accomplishments</b></p>		<p><b>Further description:</b></p>
<p>Number of post-stocking survival tasks met, as prescribed by Recovery plans for hatchery propagated listed species. (PART)</p>	<p>1</p>	<p>Water management issues and over-harvesting decimated populations of salmon in the Umatilla Basin of Eastern Oregon. The Confederated Tribes of Umatilla undertook a supplementation program to reestablish the salmon runs by using stocks from the Columbia River National Fish Hatcheries. In addition, another important fish of the Umatilla tribe's heritage, Pacific lamprey, are also being restored to the basin. Because this program involves inter-basin transfers of fish, health officials of Washington, Oregon and US Fish &amp; Wildlife Service require that all fish be certified in order to establish healthy, viable stocks able to survive and return to the Umatilla Basin. In FY2006, the Lower Columbia River Fish Health Ctr. regularly examined the health of fish destined for the Umatilla Supplementation Program through the use of clinical and veterinary technology. This information was shared with the Oregon Dept. Fish &amp; Wildlife Pathology Unit and Umatilla Tribe personnel. In addition, the Fish Health Ctr. talks yearly with tribal and state agency personnel to provide input on the Umatilla Hatchery and Basin Annual Operation Plan. The Umatilla program uses fish reared at the Little White Salmon National Hatchery. Funded by BPA.</p>
<p>Number of Fishery Management Plan production tasks implemented (PART)</p>	<p>1</p>	
<p>Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation</p>	<p>2</p>	
<p>Number of applied science and technology tasks implemented as prescribed by Fishery Management Plans. (PART)</p>	<p>2</p>	

13231-A-010 - [Yakama Indian Nation Fish Health Program](#)

<b>Facility</b>	Lower Columbia River Fish Health Center	<p><b>Accomplishment Summary</b></p> <p>The Lower Columbia River Fish Health Ctr. inspected and certified the health of over 1 million salmon for the Yakama Indian Nation's supplementation programs at the Klickitat and Prosser Hatcheries.</p> <p><b>Description</b></p> <p><b>The importance to the Resource:</b></p> <p>The Yakama/Klickitat Fisheries Project of the Yakama Nation seeks to rebuild and maintain populations of naturally spawning salmon to replace runs of fish made extinct by habitat changes, harvest, and hydropower.</p> <p><b>The problem:</b></p> <p>Habitat changes, harvest and hydropower have reduced runs of salmon to the Klickitat and Yakima Basins, reducing traditional fisheries and cultural activities of the Yakama Nation.</p> <p><b>The objective:</b></p> <p>As part of a large program that intends to improve salmon survival, the Lower Columbia Fish Health Ctr. (FHC) plays an integral role by helping minimize the transmission of pathogens to produce healthy coho, fall and spring Chinook salmon, and steelhead for release into the Yakima and Klickitat Basins.</p> <p><b>The method:</b></p> <p>The FHC uses up-to-date technology to examine the health of fish coming into and being released from the Yakiman and Klickitat Basins. Along with the Prosser Hatchery and its acclimation sites, the FHC recently took on the fish health care of the Klickitat Hatchery, a new acquisition for the Yakama Nation.</p>			
<b>Expended</b>	\$71142				
<b>Objective</b>	Provide technical assistance to Tribes.				
<b>Primary Benefited Species</b>	Chinook salmon or king salmon ( <a href="#">Oncorhynchus tshawytscha</a> )				
<b>Primary Benefited Population</b>	<a href="#">Yakima River Summer/Fall-Run Chinook Salmon</a>				
<b>Plans</b>	<p>U.S. Fish and Wildlife Service National Aquatic Animal Health Policy</p> <p>Yakima Subbasin Plan</p> <p>1999 NMFS Biological Opinion on Artificial Propagation in the Columbia River Basin.</p> <p>Conservation of Columbia Basin Fish, Final Basinwide Salmon Recovery Strategy, 12/2000 (All H Paper)</p>				
<b>Keyword</b>	Fish Health				
<b>Need Number</b>	N-002				
<b>Partners</b>	Yakama Indian Nation				
<p><b>Accomplishments</b></p> <table border="1"> <tr> <td>Number of post-stocking survival tasks met, as prescribed by Recovery plans for hatchery propagated listed species. (PART)</td> <td>1</td> </tr> <tr> <td>Number of other Recovery Plan tasks implemented for T&amp;E populations</td> <td>2</td> </tr> </table>			Number of post-stocking survival tasks met, as prescribed by Recovery plans for hatchery propagated listed species. (PART)	1	Number of other Recovery Plan tasks implemented for T&E populations
Number of post-stocking survival tasks met, as prescribed by Recovery plans for hatchery propagated listed species. (PART)	1				
Number of other Recovery Plan tasks implemented for T&E populations	2				

Number of Fishery Management Plan production tasks implemented (PART)	2	<p><b>Further description:</b></p> <p>The FHC visits the Prosser Hatchery at least 20 times per year to monitor fish health and to ensure that proper nutrition and disease management are maintained. Beginning in July, the same protocols are being followed at the Yakama's latest acquisition, the Klickitat Hatchery. For the Lower Yakama supplementation efforts in FY06, we examined the health of 9 stocks of salmon at the Prosser and Klickitat Hatcheries and 2 stocks of salmon at 3 acclimation sites. The wild steelhead kelts are also examined for whirling disease when needed. The Lower Columbia FHC and the Olympia FHC (for Yakama's CleElum Program) sign an annual MOU with the Yakama Nation who funds these programs.</p>
Number of other Fishery Management Plan tasks implemented for populations of management concern.	3	
Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation	5	
Number of applied science and technology tasks implemented as prescribed by Fishery Management Plans. (PART)	1	

**13231-A-012 - [Ecological Interactions of Wild and Hatchery Fish in the Warm Springs and Deschutes River System](#)**

<b>Facility</b>	Lower Columbia River Fish Health Center	<p><b>Accomplishment Summary</b></p> <p>Measured health of wild Chinook salmon and other native fish from the Warm Springs River and Shitike Creek. Fish health testing shows that wild and hatchery salmon carry the same pathogens, an indication of their identical genetic origins, similar ocean destinations and food sources. Additional field sampling and testing of other native species is ongoing. DNA technology is used for disease detection and to prevent the spread of microbial aquatic nuisance species that cause disease.</p> <p><b>Description</b></p> <p><b>The importance to the Resource:</b></p> <p>The Warm Springs National Hatchery annually releases 750,000 fish into the Deschutes River system which contains wild Chinook salmon, steelhead and endangered bull trout. It is important to ensure that both the wild and hatchery fish cohabit without adverse consequences, a goal of the Confederated Tribes of the Warm Springs.</p> <p><b>The problem:</b></p> <p>Interactions of wild and hatchery fish can result in disease transmission.</p> <p><b>The objective:</b></p> <p>To increase fish survival and to prevent disease transmission between hatchery and wild fish. While the common myth states that hatchery fish transmit disease to wild fish, the converse can be true and pathogens of native fish may be transmitted through the river water to the captive hatchery fish. This study examines both hatchery and wild fish</p>
<b>Expended</b>	\$9731	
<b>Objective</b>	Facilitate management of aquatic habitats on national and regional scales.	
<b>Primary Benefited Species</b>	Bull trout ( <a href="#">Salvelinus confluentus</a> )	
<b>Primary Benefited Population</b>	<a href="#">Lower Deschutes River core area Bull Trout</a>	
<b>Plans</b>	<p>U.S. Fish and Wildlife Service National Aquatic Animal Health Policy</p> <p>National Wild Fish Health Survey</p> <p>Warm Springs Hatchery and Genetic Management Plan (draft)</p> <p>1999 NMFS Biological Opinion on Artificial Propagation in the Columbia River Basin.</p> <p>2000 NMFS FCRPS Biological Opinion - December 21, 2000</p> <p>Conservation of Columbia Basin Fish, Final Basinwide Salmon Recovery Strategy, 12/2000 (All H Paper)</p>	
<b>Keyword</b>	Fish Health	
<b>Need Number</b>	N-002	
<b>Partners</b>	Confederated Tribes of The Warm Springs	

U.S. Geological  
Survey, Columbia River  
Research Lab

## Accomplishments

Number of population assessments completed	2
Number of post-stocking survival tasks met, as prescribed by Recovery plans for hatchery propagated listed species. (PART)	1
Number of other Recovery Plan tasks implemented for T&E populations	3
Number of post stocking survival tasks met as prescribed by Fishery Management Plans, for hatchery propagated depleted species (PART)	1
Number of other Fishery Management Plan tasks implemented for populations of management concern.	1
Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation	2
Number of consultations conducted to support Tribal fish & wildlife conservation.	1
Number of techniques and culture technology tools developed.	1
Number of applied science and technology tasks implemented as prescribed by Recovery Plans. (PART)	1
Number of applied science and technology tasks implemented as prescribed by Fishery Management Plans. (PART)	3

### **The method:**

Since the inception of the hatchery, its fish have been subjected to intensive health exams and management by the Lower Columbia River Fish Health Ctr. To address issues of disease transmission between hatchery and wild fish in FY06, wild fish were examined for disease pathogens using DNA technology and standard methodology.

### **Further description:**

Interactions of wild and hatchery fish can result in disease transmission. The Warm Springs National Hatchery annually releases 750,000 fish into the Deschutes River system which contains wild Chinook salmon, steelhead and endangered bull trout. Since the inception of the hatchery, its fish have been subjected to intensive health exams and management by the Lower Columbia River Fish Health Ctr. This is to increase fish survival and to prevent disease transmission to the wild fish. Conversely, the pathogens of native fish can be transmitted through the river water to the captive hatchery fish. To address issues of disease transmission between hatchery and wild fish in FY06, wild fish were examined for disease pathogens. Clinical testing shows that wild and hatchery salmon carry the same pathogens, an indication of their identical genetic origins, similar ocean destinations and food sources. Additional field sampling and testing of other native species is ongoing. DNA technology is used for disease detection and to prevent the spread of microbial aquatic nuisance species that cause disease. This technology is also being tested to determine whether non-lethal sampling methods can be used to detect infections. FONS# 2000-003.

**13231-A-014 - [Investigational New Animal Drug \(INAD\) program and its use at Columbia River Natl. Fish Hatcheries](#)**

<b>Facility</b>	Lower Columbia River Fish Health Center	<p><b>Accomplishment Summary</b></p> <p>Chemotherapeutants prevented or controlled disease outbreaks in five lots of salmonids at three hatcheries, allowing successful release of healthy salmon for tribal supplementation and mitigation programs.</p> <p><b>Description</b></p> <p><b>The importance to the Resource:</b></p> <p>Bacterial kidney disease, coldwater disease and bacterial gill disease can cause serious mortalities in fish. Studies investigating the judicious use of antibiotics for disease control are used to provide validation for safe use, as required by the Food and Drug Administration.</p> <p><b>The problem:</b></p> <p>There is a lack of studies verifying the safe and proper use of chemotherapeutants for treating disease in aquaculture facilities.</p> <p><b>The objective:</b></p> <p>When disease outbreaks occur at a hatchery, the Lower Columbia River Fish Health Ctr. may recommend treatment with antibiotic under controlled conditions. This is to enhance drug application and determine its efficacy and safety in controlling disease.</p> <p><b>The method:</b></p> <p>Diagnosis of furunculosis in the coho at one hatchery necessitated a timely intervention with oxytetracycline medicated feed. At two hatcheries, erythromycin is used to control bacterial kidney disease. Personnel monitor the drug studies and forward the information to the National INAD Office to help garner drug</p>
<b>Expended</b>	\$10000	
<b>Objective</b>	Minimize range expansion and population growth of established aquatic nuisance species.	
<b>Primary Benefited Species</b>	Chinook salmon or king salmon ( <a href="#">Oncorhynchus tshawytscha</a> )	
<b>Primary Benefited Population</b>	<a href="#">Wild Warm Springs River Spring Chinook</a>	
<b>Plans</b>	<p>U.S. Fish and Wildlife Service National Aquatic Animal Health Policy</p> <p>Warm Springs National Fish Hatchery Assessments and Recommendations Final Report</p> <p>Little White NFH Spring Chinook Salmon Hatchery and Genetic Management Plan</p> <p>Yakima Subbasin Plan</p>	
<b>Keyword</b>	Fish Health	
<b>Need Number</b>	N-002	
<b>Partners</b>	<p>Confederated Tribes of the Umatilla Indian Reservation</p> <p>Yakama Indian Nation</p>	
<b>Accomplishments</b>		

Number of other Recovery Plan tasks implemented for T&E populations	1	<p>approval by FDA.</p> <p><b>Further description:</b></p> <p>While antibiotics can help reduce disease, their use can create drug resistance. Towards that issue, the Lower Columbia River FHC is doing a long-term study that looks at reducing the use while maintaining the current survival benefits provided to fish. Personnel monitor the drug studies and forward the information to the National INAD Office for the Federal-State Aquaculture Drug Approval Partnership Project to help garner drug approval by FDA. We also provide fish health /therapeutic services for tribal, federal, and state biologists.</p>
Number of Fishery Management Plan production tasks implemented (PART)	1	
Number of other Fishery Management Plan tasks implemented for populations of management concern.	2	
Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation	2	
Number of applied science and technology tasks implemented as prescribed by Fishery Management Plans. (PART)	2	

13231-A-016 - [DNA Technology to Improve Hatchery Practices and Reduce Disease](#)

<b>Facility</b>	Lower Columbia River Fish Health Center	<p><b>Accomplishment Summary</b></p> <p>New instrumentation allows rapid disease detection through analysis of DNA. This helps determine how to improve hatchery practices to reduce disease and save 1000's of fish.</p> <p><b>Description</b></p> <p><b>The importance to the Resource:</b></p> <p>A new DNA technology called quantitative polymerase chain reaction (QPCR) can detect very low levels of disease in eggs, water and young fish. The QPCR instrumentation is used by the Lower Columbia River Fish Health Ctr. to help detect routes of disease, allowing hatcheries to improve or modify practices.</p> <p><b>The problem:</b></p> <p>Bacterial kidney disease kills thousands of salmon every year, resulting in expensive efforts to reduce this disease. The drug erythromycin is used to prevent this disease and improve survival but this has its risks and deducing where disease starts might reduce of this antibiotic.</p> <p><b>The objective:</b></p> <p>Track points of disease dissemination at the hatchery to ascertain how to best control disease so that antibiotic use can be reduced or eliminated.</p> <p><b>The method:</b></p> <p>The QPCR allows studies to determine routes of disease transmission. For instance, the Warm Springs NFH maintains the genetics and environmental integrity of the native wild salmon by identifying their fish with a tiny snout tag which may inadvertently cause localized</p>	
<b>Expended</b>	\$30471		
<b>Objective</b>	Utilize appropriate scientific and technologic tools in formulating and executing fishery management plans and policies.		
<b>Primary Benefited Species</b>	Chinook salmon or king salmon ( <a href="#">Oncorhynchus tshawytscha</a> )		
<b>Primary Benefited Population</b>	<a href="#">Wild Warm Springs River Spring Chinook</a>		
<b>Plans</b>	<p>U.S. Fish and Wildlife Service National Aquatic Animal Health Policy</p> <p>Warm Springs Hatchery and Genetic Management Plan (draft)</p> <p>National Wild Fish Health Survey</p> <p>Conservation of Columbia Basin Fish, Final Basinwide Salmon Recovery Strategy, 12/2000 (All H Paper)</p>		
<b>Keyword</b>	Fish Technology		
<b>Need Number</b>	N-002		
<b>Partners</b>	Confederated Tribes of The Warm Springs		
<p><b>Accomplishments</b></p> <table border="1"> <tr> <td>Number of other Recovery Plan tasks</td> <td>4</td> </tr> </table>			Number of other Recovery Plan tasks
Number of other Recovery Plan tasks	4		

implemented for T&E populations		infections.
Number of techniques and culture technology tools developed.	1	<b>Further description:</b>
Number of applied science and technology tasks implemented as prescribed by Recovery Plans. (PART)	1	Bacterial kidney disease kills thousands of salmon every year, resulting in expensive efforts to reduce this disease. A new DNA technology called quantitative polymerase chain reaction (QPCR) can detect very low levels of disease in eggs, water and young fish, something not possible by the standard methodologies. The QPCR instrumentation is used by the Lower Columbia River Fish Health Ctr. to help detect routes of disease, allowing hatcheries to improve or modify practices. For instance, the Warms Springs NFH maintains the genetics and environmental integrity of the native wild salmon by identifying their fish with a tiny snout tag which may inadvertently cause localized infections. The QPCR will allow studies to determine whether this is a route of disease transmission. This is important as it could mean a reduction in use of erythromycin, a drug currently being used to prevent BKD which is a concern to the Confederated Tribes of the Warm Springs Reservation who help manage the hatchery. This is FONS project 13231-2002-008 funded by the Columbia Basin Salmon Initiative.
Number of applied science and technology tasks implemented as prescribed by Fishery Management Plans. (PART)	3	

13231-A-023 - [Supplementation of Chinook Salmon to the Walla Walla Basin](#)

<b>Facility</b>	Lower Columbia River Fish Health Center	<p><b>Accomplishment Summary</b></p> <p>The Lower Columbia River Fish Health Center performed disease inspection and certification of 500,000 Chinook salmon to ensure that healthy fish were delivered to the Confederated Tribes of the Umatilla for restoration efforts in the Walla Walla Basin.</p> <p><b>Description</b></p> <p><b>The importance to the Resource:</b></p> <p>The Confederated Tribes of the Umatilla Indian Reservation plan to restore Chinook salmon that were originally depleted by environment changes into the Walla Walla Basin.</p> <p><b>The problem:</b></p> <p>Because this program involves inter-basin transfers of fish, health officials of Washington and the US Fish &amp; Wildlife Service require that all fish be certified in order to establish healthy, viable stocks able to survive and return to the Walla Walla Basin.</p> <p><b>The objective:</b></p> <p>The Little White Salmon National Fish Hatchery is cooperating with the Ringold Hatchery in providing salmon to establish a source of healthy spring Chinook for natural spawning augmentation by the Umatilla Tribe.</p> <p><b>The method:</b></p> <p>Using veterinary technology, the Lower Columbia River FHC conducted disease inspections of the adult salmon and health certifications of their progeny to ensure that the fish met the health goals of this restoration project.</p>
<b>Expended</b>	\$2000	
<b>Objective</b>	Provide fish for Tribal resource management.	
<b>Primary Benefited Species</b>	Chinook salmon or king salmon ( <a href="#">Oncorhynchus tshawytscha</a> )	
<b>Primary Benefited Population</b>	<a href="#">Umatilla River Spring Chinook</a>	
<b>Plans</b>	<p>Conservation of Columbia Basin Fish, Final Basinwide Salmon Recovery Strategy, 12/2000 (All H Paper)</p> <p>U.S. Fish and Wildlife Service National Aquatic Animal Health Policy</p> <p>1999 NMFS Biological Opinion on Artificial Propagation in the Columbia River Basin.</p> <p>2000 NMFS FCRPS Biological Opinion - December 21, 2000</p> <p>Little White NFH Spring Chinook Salmon Hatchery and Genetic Management Plan</p>	
<b>Keyword</b>	Fish Health	
<b>Need Number</b>	N-002	
<b>Partners</b>	Confederated Tribes of the Umatilla Indian Reservation	

**Accomplishments**

Recovery Plan production tasks implemented (PART)	1
Number of other Recovery Plan tasks implemented for T&E populations	4
Number of Fishery Management Plan production tasks implemented (PART)	1
Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation	1
Number of applied science and technology tasks implemented as prescribed by Fishery Management Plans. (PART)	1

**Further description:**

In last two years, this program was funded under 1937-xxxx with funds from BPA. In FY06, no funding from BPA

13240-A-009 - [Sooes River strain fall chinook salmon production for out planting.](#)

<b>Facility</b>	Makah National Fish Hatchery
<b>Expended</b>	\$214691
<b>Objective</b>	Provide fish for Tribal resource management.
<b>Primary Benefited Species</b>	Chinook salmon or king salmon ( <a href="#">Oncorhynchus tshawytscha</a> )
<b>Primary Benefited Population</b>	Not specified
<b>Plans</b>	Makah NFH Cooperative Agreement The Service's Native American Policy Vision Action Plan and the Hatchery Evaluation Action Plan
<b>Keyword</b>	Tribal
<b>Need Number</b>	N-002
<b>Partners</b>	Makah Indian Nation

**Accomplishments**

Number of Fishery Management Plan production tasks implemented (PART)	1
number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)	1
Number of other Fishery Management Plan tasks implemented for populations of management concern.	3

**Accomplishment Summary**

Restore run of native Fall Chinook salmon to the Sooes River. Returning adults benefit domestic and international ocean fisheries, tribal river fisheries and sport fishing for the general public.

**Description**

**The importance to the Resource:**

Returning adult Sooes river Fall Chinook salmon contribute to salmon returns region wide, supporting ocean commercial fisheries. In addition, Chinook salmon returning to the Sooes River support important tribal commercial and river subsistence fisheries on the Makah Reservation and a thriving sport fishery for non-tribal members.

**The problem:**

The hatchery 's Fall Chinook program was initiated in response to the low returns of adult salmon to the region by the early 70's, due primarily to overfishing, habitat degradation and poor ocean conditions.

**The objective:**

Yearly releases of young Sooes River strain Fall Chinook salmon on the Makah Indian Reservation help to rebuild the depleted run of this unique species to harvestable levels.

**The method:**

In FY2006, the hatchery released 2,149,898 young fall Chinook salmon at 3.13 inches in length into the lower Sooes River.

**Further description:**

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**13240-A-010 - [Coho salmon production for out planting into the Sooes river, Makah Indian Reservation.](#)**

<b>Facility</b>	Makah National Fish Hatchery	<p><b>Accomplishment Summary</b></p> <p>Restore depleted run of coho salmon to the Sooes River. Returning adult salmon contribute to international and domestic ocean fisheries, tribal river fisheries and sport fishing for the public.</p> <p><b>Description</b></p> <p><b>The importance to the Resource:</b></p> <p>Returning adult coho salmon contribute to restoring regional salmon returns, supporting ocean commercial fisheries. In addition, adult coho salmon returning to the Sooes river provide important river commercial and subsistence fisheries to tribal members on the Makah Indian Reservation and offer sport fishing opportunities to the general public</p> <p><b>The problem:</b></p> <p>The hatchery's coho salmon program was initiated in response to the low returns of adult salmon to the region by the early 70's, due primarily to overfishing, habitat degradation and poor ocean conditions.</p> <p><b>The objective:</b></p> <p>Yearly releases of young coho salmon within the Makah Indian Reservation help to rebuild depleted runs of this unique species to harvestable levels.</p> <p><b>The method:</b></p> <p>During FY2006, the hatchery released 181,394 yearling coho salmon at 5.2 inches into the lower Sooes River.</p> <p><b>Further description:</b></p>							
<b>Expended</b>	\$157108								
<b>Objective</b>	Provide fish for Tribal resource management.								
<b>Primary Benefited Species</b>	Coho salmon or silver salmon ( <a href="#">Oncorhynchus kisutch</a> )								
<b>Primary Benefited Population</b>	Not specified								
<b>Plans</b>	Makah NFH Cooperative Agreement The Service's Native American Policy Vision Action Plan and the Hatchery Evaluation Action Plan								
<b>Keyword</b>	Tribal								
<b>Need Number</b>	N-002								
<b>Partners</b>	Makah Indian Nation								
<p><b>Accomplishments</b></p> <table border="1"> <tr> <td>Number of Fishery Management Plan production tasks implemented (PART)</td> <td>1</td> </tr> <tr> <td>number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)</td> <td>1</td> </tr> <tr> <td>Number of other Fishery Management Plan tasks implemented for populations of management concern.</td> <td>4</td> </tr> <tr> <td>Number of technical assistance requests</td> <td>5</td> </tr> </table>			Number of Fishery Management Plan production tasks implemented (PART)	1	number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)	1	Number of other Fishery Management Plan tasks implemented for populations of management concern.	4	Number of technical assistance requests
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Number of other Fishery Management Plan tasks implemented for populations of management concern.	4								
Number of technical assistance requests	5								

fulfilled to support Tribal fish and wildlife conservation	.
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**13240-A-011 - [Coho salmon production for transfer to the Waatch River, Makah Indian Reservation.](#)**

<b>Facility</b>	Makah National Fish Hatchery
<b>Expended</b>	\$7058
<b>Objective</b>	Provide fish for Tribal resource management.
<b>Primary Benefited Species</b>	Coho salmon or silver salmon ( <a href="#">Oncorhynchus kisutch</a> )
<b>Primary Benefited Population</b>	Not specified
<b>Plans</b>	Makah NFH Cooperative Agreement The Service's Native American Policy Vision Action Plan and the Hatchery Evaluation Action Plan
<b>Keyword</b>	Tribal
<b>Need Number</b>	N-002
<b>Partners</b>	Makah Indian Nation

**Accomplishments**

Number of Fishery Management Plan production tasks implemented (PART)	1
Number of other Fishery Management Plan tasks implemented for populations of management concern.	4

**Accomplishment Summary**

Rebuild depleted run of coho salmon to the Waatch River. Returning adult salmon contribute to international and domestic ocean fisheries, tribal river fisheries and sport fishing for the public.

**Description**

**The importance to the Resource:**  
Returning adult coho salmon to the Waatch River contribute to international and domestic ocean commercial fisheries. In addition, adult returns support important tribal commercial and river subsistence fisheries on the Makah Reservation and offer quality sport fishing opportunities to the general public

**The problem:**

The hatchery's coho salmon program was initiated in response to the low returns of adult salmon to the region by the early 70's, due primarily to overfishing, habitat degradation and poor ocean conditions.

**The objective:**

Yearly releases of young coho salmon within the Makah Indian Reservation help to rebuild depleted runs of this unique species to harvestable levels.

**The method:**

During FY2006, the hatchery transferred 32,396 coho yearling at 5 inches to the Educkett Creek holding facility for later release into the Waatch River.

	<b>Further description:</b> .
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**13240-A-012 - [Winter steelhead trout production for transfer to the Waatch River, Makah Indian Reservation.](#)**

<b>Facility</b>	Makah National Fish Hatchery	<p><b>Accomplishment Summary</b></p> <p>Rebuild winter steelhead trout run in the Waatch River, increasing fishing opportunities on the Makah Indian Reservation for both tribal members and the general public.</p> <p><b>Description</b></p> <p><b>The importance to the Resource:</b></p> <p>Returning adult winter steelhead trout to the Waatch River provide quality fishing opportunities on the Makah Indian Reservation for tribal commercial and subsistence fisheries and sport fishing for the general public</p> <p><b>The problem:</b></p> <p>The hatchery's winter steelhead trout program was initiated in response to the low returns of adult trout to the region by the early 70's, due primarily to overfishing, habitat degradation and poor ocean conditions.</p> <p><b>The objective:</b></p> <p>Yearly releases of young winter steelhead trout within the Makah Indian Reservation help to rebuild depleted runs of this unique species to harvestable levels.</p> <p><b>The method:</b></p> <p>During FY2006 the hatchery transferred 25,913 steelhead trout yearling at 7.4 inches to the Educkett Creek holding facility for later release into the Waatch River.</p> <p><b>Further description:</b></p> <p>.</p>			
<b>Expended</b>	\$8000				
<b>Objective</b>	Provide fish for Tribal resource management.				
<b>Primary Benefited Species</b>	Rainbow trout ( <a href="#">Oncorhynchus mykiss</a> )				
<b>Primary Benefited Population</b>	Not specified				
<b>Plans</b>	Makah NFH Cooperative Agreement The Service's Native American Policy Vision Action Plan and the Hatchery Evaluation Action Plan				
<b>Keyword</b>	Tribal				
<b>Need Number</b>	N-002				
<b>Partners</b>	Makah Indian Nation				
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Number of Fishery Management Plan production tasks implemented (PART)	1				
Number of other Fishery Management Plan tasks implemented for populations of management concern.	4				

13240-A-013 - [Winter steelhead trout production for outplanting in the Sooes River](#)

<b>Facility</b>	Makah National Fish Hatchery	<p><b>Accomplishment Summary</b></p> <p>Rebuild winter steelhead trout run in the Sooes River, increasing fishing opportunities on the Makah Indian Reservation for both tribal members and the general public.</p> <p><b>Description</b></p> <p><b>The importance to the Resource:</b></p> <p>Returning adult winter steelhead trout to the Sooes River provide increased fishing opportunities on the Makah Indian Reservation for tribal commercial and subsistence fisheries and sport fishing for the general public.</p> <p><b>The problem:</b></p> <p>The hatchery's winter steelhead trout program was initiated in response to the low returns of adult steelhead trout to the region by the early 70's, due primarily to overfishing, habitat degradation and poor ocean conditions.</p> <p><b>The objective:</b></p> <p>Yearly releases of young winter steelhead trout within the Makah Indian Reservation help to rebuild depleted runs of this unique species to harvestable levels.</p> <p><b>The method:</b></p> <p>During FY2006, the hatchery released 143,320 steelhead trout yearling at 7.6 inches into the lower Sooes River.</p>					
<b>Expended</b>	\$157000						
<b>Objective</b>	Provide fish for Tribal resource management.						
<b>Primary Benefited Species</b>	Rainbow trout ( <a href="#">Oncorhynchus mykiss</a> )						
<b>Primary Benefited Population</b>	Not specified						
<b>Plans</b>	Makah NFH Cooperative Agreement The Service's Native American Policy Vision Action Plan and the Hatchery Evaluation Action Plan						
<b>Keyword</b>	Tribal						
<b>Need Number</b>	N-002						
<b>Partners</b>	Makah Indian Nation						
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Number of Fishery Management Plan production tasks implemented (PART)	1						
number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)	1						
Number of other Fishery Management Plan tasks implemented for populations of management concern.	4						

13240-A-014 - [Salmon and steelhead trout carcass distribution to the Makah Indian Tribe](#)

<b>Facility</b>	Makah National Fish Hatchery
<b>Expended</b>	\$4000
<b>Objective</b>	Provide fish for Tribal resource management.
<b>Primary Benefited Species</b>	Chinook salmon or king salmon ( <a href="#">Oncorhynchus tshawytscha</a> )
<b>Primary Benefited Population</b>	Not specified
<b>Plans</b>	The Service's Native American Policy Vision Action Plan and the Hatchery Evaluation Action Plan
<b>Keyword</b>	Tribal
<b>Need Number</b>	N-002
<b>Partners</b>	

**Accomplishments**

Number of other Fishery Management Plan tasks implemented for populations of management concern.	2
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**Accomplishment Summary**

Distribution of adult salmon and steelhead trout carcass to members of the Makah Indian Tribe.

**Description**

**The importance to the Resource:**

Traditionally, adult salmon and steelhead trout provided much needed food through the winter months for Indian tribes in the Pacific Northwest. Adult salmon and steelhead trout carcasses distributed by the hatchery provides a source of food to Makah Tribal members and also non-members when fish numbers are abundant

**The problem:**

The Makah Hatchery was established about 1982 to increase adult salmon and steelhead trout returns to the region. By the early 1970's adult fish returns to the Makah Reservation had dwindled to literally dozens of adult fish returning to local rivers. The decline was due primarily to over fishing and habitat degradation.

**The objective:**

Through a Business lease agreement established between the Makah Tribe (Tribe) and the Makah National Fish Hatchery, the Hatchery is required to provide all spawned and excess adult fish to the Tribe at the time of adult fish return to the Hatchery.

**The method:**

During FY2006, the hatchery distributed approximately 1,000 adult Fall Chinook salmon, 1,500 adult coho salmon and 600 adult winter steelhead trout carcasses to

	<p>members of the Makah Indian Tribe, with a portion going to non-tribal members.</p> <p><b>Further description:</b></p>
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13240-A-015 - [Egg Incubation Isolation Unit for Lake Ozette Sockeye recovery.](#)

<b>Facility</b>	Makah National Fish Hatchery
<b>Expended</b>	\$7200
<b>Objective</b>	Provide technical assistance to Tribes.
<b>Primary Benefited Species</b>	Sockeye salmon ( <a href="#">Oncorhynchus nerka</a> )
<b>Primary Benefited Population</b>	<a href="#">Ozette Lake ESU</a>
<b>Plans</b>	The Service's Native American Policy Puget Sound and Coastal Washington Hatchery Reform Project Makah NFH Cooperative Agreement
<b>Keyword</b>	Tribal
<b>Need Number</b>	N-002
<b>Partners</b>	Makah Indian Nation

**Accomplishments**

Number of other Fishery Management Plan tasks implemented for populations of management concern.	4
Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation	1

**Accomplishment Summary**

Assist the Makah Tribe with their Lake Ozette sockeye recovery efforts. The Makah NFH provides an isolation quarantine facility for egg incubation and thermal marking of egg otoliths.

**Description**

**The importance to the Resource:**

Lake Ozette sockeye salmon have provided food and spiritual sustenance to the Makah Indians since before the arrival of European settlers. Historically, adult returns numbered in the thousands.

**The problem:**

During the last few decades this stock has been reduced to a few hundred adults, due primarily to the loss of freshwater habitat, poor ocean conditions and over harvest. As a result, this stock has been listed as threatened under the Endangered Species Act.

**The objective:**

This project will contribute to the recovery of the Lake Ozette sockeye through propagation efforts conducted at the Makah National Fish Hatchery(Hatchery). Recovery will be accelerated by making available sufficient numbers of young fish to meet stocking requirements specified in the Lake Ozette Sockeye Hatchery and Genetic Management Plan.

**The method:**

In FY06, \$7,200 was used to fund yearly operational costs associated with the egg isolation building, \$2,500 of which the Makah Tribe purchased chlorine tablets. The Hatchery

	<p>successfully incubated 233,000 Lake Ozette sockeye eggs to the eyed stage ( 81 percent) and thermally marked the developing eggs for the Tribe's mark recovery program.</p>
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**Further description:**

**13240-A-021 - [Feed Quality Control Program to monitor the quality of commercial fish feeds used at Region 1 NFHs.](#)**

<b>Facility</b>	Makah National Fish Hatchery	<p><b>Accomplishment Summary</b></p> <p>A total of 6 diets were analyzed in FY06 at Abernathy FTC for Makah. Staff provided feed-related technical assistance to NFHs as well as feed mills. One diet also was analyzed for rancidity and two common aflatoxins (vomitoxin and mycotoxins)* as increased mortalities were observed in fish fed certain Skretting Starter feeds. It was later determined that the problem was due to poor quality soy protein in the diets.</p> <p><b>Description</b></p> <p><b>The importance to the Resource:</b></p> <p>Abernathy FTC's Applied Research Program in Nutrition operates a Fish Feed Quality Control (FFQC) Program to monitor the quality of commercial fish feeds used at Region 1 NFHs. The information provided by the Center is critical to both contracting negotiations and to the quality and survivability of fish produced by the Pacific Region's NFHs.</p> <p><b>The problem:</b></p> <p>Commercial fish feeds do not always contain the specified concentrations of protein, fat, ash and moisture. Such diets can result in poor growth and health when fed to NFH-reared fish.</p> <p><b>The objective:</b></p> <p>The objective of the FFQC Program is to determine whether commercial feeds fall within approved specifications. An additional objective is to determine the chemical composition and quality (via proximate, rancidity, vitamin and mineral analyses) of commercial feeds. Staff provided feed-related technical assistance to NFHs as well as feed</p>
<b>Expended</b>	\$4000	
<b>Objective</b>	Provide fish for Tribal resource management.	
<b>Primary Benefited Species</b>	Chinook salmon or king salmon ( <a href="#">Oncorhynchus tshawytscha</a> )	
<b>Primary Benefited Population</b>	Not specified	
<b>Plans</b>	Puget Sound and Coastal Washington Hatchery Reform Project The Service's Native American Policy	
<b>Keyword</b>	Fish Technology	
<b>Need Number</b>	N-002	
<b>Partners</b>	Makah Indian Nation	

mills.

**The method:**

6 diets were analyzed for Makah. Staff provided feed-related technical assistance to NFHs. One diet also was analyzed for rancidity and two common aflatoxins (vomitoxin and mycotoxins)\* as increased mortalities were observed in fish fed certain Skretting feeds. It was determined that the problem was due to poor quality soy protein in the diets.

**Further description:**

In early Spring, increased mortalities were observed in fish fed Skretting Starter feeds at Makah and Quilcene NFHs. Additional testing was done (rancidity, aflatoxins, vitamins) to determine whether the mortalities resulted from a problem with the diets. It was later determined that the problem was related to poor quality soy protein concentrate used in the diets. Skretting has since indicated it will no longer use soy protein in its starter feeds. BioOregon announced that its popular moist fish feed called BioDiet Starter as well as their other moist products would no longer be manufactured as the company was undergoing a merger with Skretting. No other companies are capable of producing a similar high moisture fish feed. BioDiet Starter was particularly popular at Chinook salmon hatcheries as many salmon culturists have observed that this species would accept only a moist feed when the fry begin to feed for the first time. Therefore, AFTC initiated a conference call with representatives of four feed companies to discuss alternative feeds for first-feeding Chinook. Personnel from numerous Region 1 hatcheries participated in the call and had a chance to talk to feed company representatives about alternative feeds.

**13330-A-105 - [Evaluation and management of hatchery mitigation programs at Leavenworth NFH Complex.](#)**

<b>Facility</b>	Mid-columbia River Fisheries Resource Office	<p><b>Accomplishment Summary</b></p> <p>Sampled the return of over 4,700 spring Chinook salmon to three federal hatcheries. Staff participated on the FWS Hatchery Review Team (Warm Springs NFH completed). Worked with state and tribal managers to collect and rear ESA-listed salmonids. Developed draft Comprehensive Hatchery Management Plans for all 3 hatchery facilities. Continued to provide ESA compliance support for the hatchery complex. Deployed temperature recorders throughout areas of Iccle Creek influenced by LNFH operations.</p> <p><b>Description</b></p> <p><b>The importance to the Resource:</b></p> <p>Effective hatchery practices produce fish for harvest, or for supplementation of wild populations, while minimizing deleterious effects on wild fish populations. Effective hatchery practices therefore are a critical component of salmon recovery in the Pacific Northwest.</p> <p><b>The problem:</b></p> <p>The US Bureau of Reclamation funds the hatchery evaluation programs associated with the Leavenworth National Fish Hatchery (LNFH) Complex (reimbursable; sub activity 1932 04BR). These programs are intended as partial mitigation for fish losses associated with Grand Coulee Dam.</p> <p><b>The objective:</b></p> <p>The Mid-Columbia River Fishery Resource Office (MCRFRO) evaluates the effectiveness of these programs and coordinates management of these stocks with other</p>							
<b>Expended</b>	\$549712								
<b>Objective</b>	Meet the Service's responsibilities for mitigating fisheries.								
<b>Primary Benefited Species</b>	Chinook salmon or king salmon ( <a href="#">Oncorhynchus tshawytscha</a> )								
<b>Primary Benefited Population</b>	<a href="#">Methow River (UCMET) spring chinook salmon.</a>								
<b>Plans</b>	<p>Leavenworth Hatchery Genetics Management Plan</p> <p>Entiat Hatchery Genetics Management Plan</p> <p>Winthrop National Fish Hatchery Genetics Management Plan</p>								
<b>Keyword</b>	Management								
<b>Need Number</b>	N-002								
<b>Partners</b>									
<p><b>Accomplishments</b></p> <table border="1"> <tr> <td>Number of population assessments completed</td> <td>4</td> </tr> <tr> <td>Number of Fishery Management Plan production tasks implemented (PART)</td> <td>4</td> </tr> <tr> <td>Number of post stocking survival tasks met as prescribed by Fishery Management Plans, for hatchery propagated depleted species (PART)</td> <td>1</td> </tr> <tr> <td>number of marking and tagging targets met,</td> <td>3</td> </tr> </table>			Number of population assessments completed	4	Number of Fishery Management Plan production tasks implemented (PART)	4	Number of post stocking survival tasks met as prescribed by Fishery Management Plans, for hatchery propagated depleted species (PART)	1	number of marking and tagging targets met,
Number of population assessments completed	4								
Number of Fishery Management Plan production tasks implemented (PART)	4								
Number of post stocking survival tasks met as prescribed by Fishery Management Plans, for hatchery propagated depleted species (PART)	1								
number of marking and tagging targets met,	3								

as prescribed by Fishery management plans. (PART)		<p>federal, state and tribal fish managers. The MCRFRO also provides ESA and NEPA compliance for the hatchery complex.</p> <p><b>The method:</b></p> <p>FY2006 activities include documenting returns to complex facilities, genetic tissue collection of all fish strains, assessment of production strategies and return rates, harvest estimates, determining impacts of hatchery production to natural stocks (including impacts to ESA listed species), fish marking, and coordination with co-managers.</p> <p><b>Further description:</b></p> <p>The US Bureau of Reclamation funds the hatchery evaluation programs associated with the Leavenworth National Fish Hatchery (LNFH) Complex. These programs are intended as partial mitigation for fish losses associated with Grand Coulee Dam. The Mid-Columbia River Fishery Resource Office (MCRFRO) evaluates the effectiveness of these programs and coordinates management of these stocks with other federal, state and tribal fish managers. MCRFRO's FY 2006 activities include providing ESA-compliance for the hatchery complex, documenting returns to each of the three facilities, genetic tissue collection of all fish strains, assessment of production strategies and their ability to return fish, harvest estimates, hatchery/wild fish disease assessments, maintenance of water temperature data loggers, determining impacts of hatchery production to natural stocks (including impacts to ESA-listed species), fish marking for study and management needs, and coordination with local and regional management entities and plans. We are also near completion of Comprehensive Hatchery Management Plans for all facilities. We completed Section 7 consultation for the operations and maintenance of Leavenworth</p>
Number of other Fishery Management Plan tasks implemented for populations of management concern.	2	
Number of applied science and technology tasks implemented as prescribed by Fishery Management Plans. (PART)	2	

	NFH.
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13295-A-001 - [Fish Health Inspections for adult salmon and steelhead returning to Makah NFH](#)

<b>Facility</b>	Olympia Fish Health Center
<b>Expended</b>	\$32800
<b>Objective</b>	Utilize appropriate scientific and technologic tools in formulating and executing fishery management plans and policies.
<b>Primary Benefited Species</b>	Chinook salmon or king salmon ( <a href="#">Oncorhynchus tshawytscha</a> )
<b>Primary Benefited Population</b>	Not specified
<b>Plans</b>	U.S. Fish and Wildlife Service National Aquatic Animal Health Policy
<b>Keyword</b>	Fish Health
<b>Need Number</b>	N-002
<b>Partners</b>	

**Accomplishments**

Number of population assessments completed	3
Number of Fishery Management Plan production tasks implemented (PART)	1

**Accomplishment Summary**

To prevent the spread of fish diseases at Makah NFH, 650 adult returning salmon and steelhead were tested for fish diseases.

**Description**

**The importance to the Resource:**

Fish Health Inspections are necessary to monitor and control viruses, bacteria and parasites that may enter hatcheries through returns of salmon and steelhead adults.

**The problem:**

Pathogens cause disease and losses of fish if not detected and held in check. Pathogens occur naturally in the wild and anadromous fish populations are constantly exposed.

**The objective:**

Prevent and reduce the loss of salmon and steelhead essential to meeting Service fishereis goals.

**The method:**

Scientifically based testing is performed to find any diseases that would be a threat to the population or would cause losses in production. Inspections of adults are also required if egg transfers are made to other locations.

**Further description:**

Pathogen inspections of adults are also required by policy and regulation if egg transfers are made to other locations.

13245-A-002 - [Transfer coho eyed eggs and fish for Port Gamble tribal net pens.](#)

<b>Facility</b>	Quilcene National Fish Hatchery
<b>Expended</b>	\$53000
<b>Objective</b>	Provide fish for Tribal resource management.
<b>Primary Benefited Species</b>	Coho salmon or silver salmon ( <a href="#">Oncorhynchus kisutch</a> )
<b>Primary Benefited Population</b>	<a href="#">Puget Sound/Strait of Georgia ESU</a>
<b>Plans</b>	Hood Canal Salmon Management Plan (Quilcene NFH) Puget Sound Salmon Management Plan Pacific Region Fisheries Outreach Action Plan
<b>Keyword</b>	Tribal
<b>Need Number</b>	N-002
<b>Partners</b>	Port Gamble S'Klallam tribe (\$1500) Washington Department of Fish and Wildlife (\$240000)

**Accomplishments**

Number of Fishery Management Plan production tasks implemented (PART)	2
number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)	2
Number of other Fishery Management Plan	3

**Accomplishment Summary**

Transferred 450,100 coho salmon eyed eggs to George Adams Washington State Hatchery (November 2006) with final destination of Port Gamble S'Klallam bay tribal net pens. Also transferred 108,000 coho fingerlings (4,046 pounds) directly to the Port Gamble S'Klallam bay tribal net pens on February 8, 2006. These transfers increased terminal recreational, commercial and tribal fishing opportunities.

**Description**

**The importance to the Resource:**

This program provides hatchery fish for increased fishing opportunities and relieves fishing pressure on wild fish stocks

**The problem:**

Provide fishing opportunity for treaty / non-treaty; recreational, and commercial fishermen

If these hatchery fish were not there for fishermen, the fishing pressure on wild stocks would be increased.

**The objective:**

Increase fishing opportunity for the treaty / non-treaty; recreational, and commercial fishermen. The fish return to the Port Gamble Bay for the Port Gamble S'Klallam tribal fishermen and other fishermen.

**The method:**

Quilcene NFH will collect, fertilize, and incubate eggs from returning adult coho salmon. Then transferred as eyed eggs to George Adams State hatchery to be hatched and reared until final transfer to tribal net pens

tasks implemented for populations of management concern.

before release.

This year Quilcene NFH also transferred 108,000 coho fingerling to the Port Gamble S'Klallam tribal net pens.

**Further description:**

The fish will be raised in the Port Gamble S'Klallam tribal net pens for several months prior to release. The returning adult salmon are then targeted by tribal/non tribal, recreational and commercial fishermen in the terminal fishing area.

All adults used in spawning are inspected by US Fish and Wildlife Service fish pathologist prior to any egg transfers. The fish raised at Quilcene National Fish Hatchery are routinely inspected by a US Fish and Wildlife Service fish pathologist.

13245-A-004 - [Big Quilcene River on station release of coho salmon smolts](#)

<b>Facility</b>	Quilcene National Fish Hatchery	<p><b>Accomplishment Summary</b></p> <p>Released 488,080 coho salmon smolts (21,912 pounds) into the Big Quilcene river. The returning adult fish will provide increased fishing opportunity for tribal/ non-tribal; recreational and commercial fishermen.</p> <p><b>Description</b></p> <p><b>The importance to the Resource:</b></p> <p>If these hatchery fish were not there for fishermen, the fishing pressure on wild stocks would be increased.</p> <p><b>The problem:</b></p> <p>Provide fishing opportunity for treaty / non-treaty; recreational, and commercial fishermen</p> <p>If these hatchery fish were not there for fishermen, the fishing pressure on wild stocks would be increased.</p> <p><b>The objective:</b></p> <p>Increase fishing opportunity for the treaty / non-treaty; recreational, and commercial fishermen. If these hatchery fish were not there for fishermen, the fishing pressure on wild stocks would be increased</p> <p><b>The method:</b></p> <p>Quilcene NFH will collect, fertilize, incubate eggs and hatch fry from returning adult coho salmon. The fish will be raised for 1 1/2 years at the hatchery prior to release as smolts into the Big Quilcene river</p> <p><b>Further description:</b></p> <p>Release of these coho salmon should result in</p>
<b>Expended</b>	\$275284	
<b>Objective</b>	Provide fish for Tribal resource management.	
<b>Primary Benefited Species</b>	Coho salmon or silver salmon ( <a href="#">Oncorhynchus kisutch</a> )	
<b>Primary Benefited Population</b>	<a href="#">Puget Sound/Strait of Georgia ESU</a>	
<b>Plans</b>	Hood Canal Salmon Management Plan (Quilcene NFH) Puget Sound Salmon Management Plan Pacific Region Fisheries Outreach Action Plan	
<b>Keyword</b>	Tribal	
<b>Need Number</b>	N-002	
<b>Partners</b>	Jamestown S'Klallam tribe Lower Elwha S'Klallam tribe Point No Point Treaty Tribes Port Gamble S'Klallam tribe Skokomish Tribe Suquamish tribe Washington Department of Fish and Wildlife	
<b>Accomplishments</b>		

Number of Fishery Management Plan production tasks implemented (PART)	2	<p>adult fish available for harvest by treaty and non-treaty commercial fisherman and recreational fishers.</p> <p>Quilcene NFH released 488,080 coho smolts into the Big Quilcene river at the end of April 2006. This amount exceeded the task of releasing 400,000 coho smolts.</p>
number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)	2	
Number of other Fishery Management Plan tasks implemented for populations of management concern.	3	

**13245-A-006 - [Excess adult Salmon carcass distribution to Treaty Tribes & provide tribal fishing opportunity](#)**

<b>Facility</b>	Quilcene National Fish Hatchery	<p><b>Accomplishment Summary</b></p> <p>Supplied 7,638 adult salmon carcasses @ 42,647 pounds for subsistence to Treaty Tribes. Provided two tribal commercial fisheries conducted below Quilcene National Fish Hatchery electric fish weir ( 71 fish @ 462 pounds) and tribal commercial fishing in Quilcene Bay ( 20,752 fish @ 134,888 pounds).</p> <p><b>Description</b></p> <p><b>The importance to the Resource:</b></p> <p>Provide excess adult salmon carcasses to tribes. This removes hatchery fish from the system and reduces the contribution of nitrogen from the decaying fish carcasses in Hood Canal. This is identified as a seasonal problem contributing to low oxygen levels in Hood Canal.</p> <p><b>The problem:</b></p> <p>Excess salmon carcasses that are not utilized decay increasing the nitrogen contribution to the system that has been identified as a seasonal problem that contributes to low oxygen levels in Hood Canal. The low oxygen levels in Hood Canal have killed bottom fish and shellfish. This also meets federal obligations to the tribes.</p> <p><b>The objective:</b></p> <p>Transfer of the adult salmon carcasses and providing fishing opportunity to the tribes meets federal obligations to the tribes. If these fish were not used they would remain in the watershed and Hood Canal contributing to the low oxygen problems.</p>
<b>Expended</b>	\$5450	
<b>Objective</b>	Recognize and promote the Service's distinct obligations toward Tribes within the Fisheries Program.	
<b>Primary Benefited Species</b>	Coho salmon or silver salmon ( <a href="#">Oncorhynchus kisutch</a> )	
<b>Primary Benefited Population</b>	<a href="#">Puget Sound/Strait of Georgia ESU</a>	
<b>Plans</b>	Hood Canal Salmon Management Plan (Quilcene NFH) Puget Sound Salmon Management Plan Pacific Region Fisheries Outreach Action Plan	
<b>Keyword</b>	Tribal	
<b>Need Number</b>	N-002	
<b>Partners</b>	Jamestown S'Klallam tribe (\$500) Lower Elwha S'Klallam tribe (\$1400) Port Gamble S'Klallam tribe (\$1250) Skokomish Tribe (\$2500) Suquamish tribe (\$350)	

## Accomplishments

Number of other Fishery Management Plan tasks implemented for populations of management concern.
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5
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## The *method*:

U.S. Fish & Wildlife Service and Bureau of Indian Affairs agreement to distribute excess adult salmon carcasses from Quilcene National Fish Hatchery to several local tribes for subsistence purposes. The tribes are the Port Gamble S'Klallam, Jamestown S'Klallam, and Lower Elwha S'Klallam, Skokomish and Suquamish tribes.

## Further description:

After tribal commitments are met, fish are distributed to the Federal Prisons Food Bank Program

13245-A-009 - [Coho salmon to Quilcene Bay net pens \( Tribal\)](#)

<b>Facility</b>	Quilcene National Fish Hatchery	<p><b>Accomplishment Summary</b></p> <p>Transferred 199,191 coho salmon fingerlings weighing 7,758 pounds to Skokomish tribal net pens in Quilcene Bay.</p> <p><b>Description</b></p> <p><b>The importance to the Resource:</b></p> <p>Provide fishing opportunity for treaty / non-treaty; recreational, and commercial fishermen .</p> <p>If these hatchery fish were not there for fishermen, the fishing pressure on wild stocks would be increased.</p> <p><b>The problem:</b></p> <p>Provide fishing opportunity for treaty / non-treaty; recreational, and commercial fishermen .</p> <p>If these hatchery fish were not there for fishermen, the fishing pressure on wild stocks would be increased.</p> <p><b>The objective:</b></p> <p>Increase fishing opportunity for the treaty / non-treaty; recreational, and commercial fishermen. The fish return to the Quilcene Bay for the Skokomish tribal fishermen and other fishermen.</p> <p><b>The method:</b></p> <p>At Quilcene NFH, spawn coho salmon adults, incubate and hatch eggs, and raise fish for over a year until transfer to tribal net pens in Quilcene Bay. These fish are raised for several months before release. The returning hatchery adult salmon are targeted by all groups of fishermen</p>					
<b>Expended</b>	\$96721						
<b>Objective</b>	Provide fish for Tribal resource management.						
<b>Primary Benefited Species</b>	Coho salmon or silver salmon ( <a href="#">Oncorhynchus kisutch</a> )						
<b>Primary Benefited Population</b>	<a href="#">Puget Sound/Strait of Georgia ESU</a>						
<b>Plans</b>	Hood Canal Salmon Management Plan (Quilcene NFH) Puget Sound Salmon Management Plan Pacific Region Fisheries Outreach Action Plan						
<b>Keyword</b>	Tribal						
<b>Need Number</b>	N-002						
<b>Partners</b>	Skokomish Tribe (\$4000) Washington Department of Fish and Wildlife (\$500)						
<p><b>Accomplishments</b></p> <table border="1"> <tr> <td>Number of Fishery Management Plan production tasks implemented (PART)</td> <td>2</td> </tr> <tr> <td>number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)</td> <td>2</td> </tr> <tr> <td>Number of other Fishery Management Plan</td> <td>3</td> </tr> </table>			Number of Fishery Management Plan production tasks implemented (PART)	2	number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)	2	Number of other Fishery Management Plan
Number of Fishery Management Plan production tasks implemented (PART)	2						
number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)	2						
Number of other Fishery Management Plan	3						

tasks implemented for populations of management concern.

**Further description:**

Provided 180,582 coho salmon weighing 6,433 pounds to net pens in Quilcene Bay. This provides additional fishing opportunities to tribal and non tribal fishermen.

All adult fish used in spawning are inspected by US Fish and Wildlife Service fish pathologist prior to any fish transfers. The fish raised at Quilcene National Fish Hatchery are routinely inspected by a US Fish and Wildlife Service fish pathologist.

13250-A-008 - [Coho Salmon Production and Distribution](#)

<b>Facility</b>	Quinault National Fish Hatchery
<b>Expended</b>	\$240463
<b>Objective</b>	Recognize and promote the Service's distinct obligations toward Tribes within the Fisheries Program.
<b>Primary Benefited Species</b>	Coho salmon or silver salmon ( <a href="#">Oncorhynchus kisutch</a> )
<b>Primary Benefited Population</b>	<a href="#">Olympic Peninsula ESU</a>
<b>Plans</b>	Quinault NFH Cooperative Agreement
<b>Keyword</b>	Tribal
<b>Need Number</b>	N-002
<b>Partners</b>	Quinault Indian Nation

**Accomplishments**

Number of Fishery Management Plan production tasks implemented (PART)	1
number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)	1
Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation	1
Number of consultations conducted to support Tribal fish & wildlife conservation.	1

**Accomplishment Summary**

Brood Year 2005: 649,573 Coho salmon were released into Cook Creek on April 24th, 2006.

**Description**

**The importance to the Resource:**

Adult coho salmon returning to the Quinault River and its tributaries provide important river commercial and subsistence fisheries to tribal members on the Quinault Tribal Reservation and offer quality tribal-guided sport fishing opportunities available to the general public

**The problem:**

Quinault NFH's coho salmon program was initiated in response to the low returns of adult salmon to the region beginning in the early 70's, due primarily to overfishing, habitat degradation and poor ocean survival conditions

**The objective:**

As part of Quinault NFH's Tribal Trust responsibilities, yearly releases of young coho salmon within the Quinault Reservation help to rebuild to harvestable levels, maintain or supplement runs of this unique species in order to maintain adequate harvest levels.

**The method:**

During FY2006, the hatchery reared and released 649,573 BY05 Coho salmon at 15 fish/pound into Cook Creek.

13250-A-010 - [Chum Salmon Production and Distribution](#)

<b>Facility</b>	Quinault National Fish Hatchery
<b>Expended</b>	\$10930
<b>Objective</b>	Provide fish for Tribal resource management.
<b>Primary Benefited Species</b>	Chum salmon ( <a href="#">Oncorhynchus keta</a> )
<b>Primary Benefited Population</b>	Not specified
<b>Plans</b>	Quinault NFH Cooperative Agreement
<b>Keyword</b>	Tribal
<b>Need Number</b>	N-002
<b>Partners</b>	Quinault Indian Nation

**Accomplishments**

Number of Fishery Management Plan production tasks implemented (PART)	1
Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation	1
Number of consultations conducted to support Tribal fish & wildlife conservation.	1

**Accomplishment Summary**

Brood Year 2005; 1,027,187 Chum salmon were released into Cook Creek as part of Quinault NFH's tribal trust responsibilities.

**Description**

**The importance to the Resource:**

Cook Creek adult Chum salmon contribute to regional salmon returns that support and contribute to international and domestic ocean commercial and sport fisheries. Adult Chum salmon returning to the Quinault River and its tributaries provide important river commercial and subsistence fisheries to tribal members on the Quinault Tribal Reservation.

**The problem:**

Quinault NFH's Chum salmon program was initiated at the request of the Quinault Indian Nation to develop additional fishing opportunities and the associated revenue.

**The objective:**

As part of Quinault NFH's Tribal Trust responsibilities, yearly releases of young chum salmon within the Quinault Reservation help to support this unique and important fishery.

**The method:**

During FY2006, the hatchery released 1,027,187 BY2005 Chum salmon at 447 fish/pound into Cook Creek.

13250-A-011 - [Steelhead Production and Distribution](#)

<b>Facility</b>	Quinault National Fish Hatchery
<b>Expended</b>	\$238354
<b>Objective</b>	Provide fish for Tribal resource management.
<b>Primary Benefited Species</b>	Rainbow trout ( <a href="#">Oncorhynchus mykiss</a> )
<b>Primary Benefited Population</b>	Not specified
<b>Plans</b>	Quinault NFH Cooperative Agreement
<b>Keyword</b>	Tribal
<b>Need Number</b>	N-002
<b>Partners</b>	Quinault Indian Nation

**Accomplishments**

Number of Fishery Management Plan production tasks implemented (PART)	1
number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)	1
Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation	1
Number of consultations conducted to support Tribal fish & wildlife conservation.	1

**Accomplishment Summary**

Brood Year 2004: 248,687 winter Steelhead trout were released into Cook Creek on the Quinault Indian Reservation.

**Description**

**The importance to the Resource:**

Cook Creek winter Steelhead trout returning to the Quinault River and its tributaries provide important commercial and subsistence fisheries to tribal members on the Quinault Tribal Reservation and offer quality tribal-guided sport fishing opportunities available to the general public

**The problem:**

As part of Quinault NFH's Tribal Trust responsibilities, yearly releases of young steelhead trout within the Quinault Reservation help to rebuild and maintain harvestable levels of fish needed for commercial and subsistant fisheries.

**The objective:**

Rear and release at least 190,000 Steelhead smolts into Cook Creek, a tributary of the Quinault River.

**The method:**

Eggs from returning adults will be collected and fish from these eggs will be reared on station for 15-16 months and then released into Cook Creek.

13250-A-016 - [Quinault National Fish Hatchery Outreach Activities](#)

<b>Facility</b>	Quinault National Fish Hatchery
<b>Expended</b>	\$6000
<b>Objective</b>	Provide fish for Tribal resource management.
<b>Primary Benefited Species</b>	Coho salmon or silver salmon ( <a href="#">Oncorhynchus kisutch</a> )
<b>Primary Benefited Population</b>	Not specified
<b>Plans</b>	Pacific Region Fisheries Outreach Action Plan
<b>Keyword</b>	Outreach
<b>Need Number</b>	N-002
<b>Partners</b>	Quinault Indian Nation

**Accomplishments**

Number of other Fishery Management Plan tasks implemented for populations of management concern.	3
Number of visitors to service facilities.	3576
Number of aquatic outreach and education activities.	2

**Accomplishment Summary**

Quinault NFH continued its goal of providing quality outreach activities for the visiting public and students of educational programs. Volunteers contributed 1600 hours of time providing tours and assistance to hatchery operations.

**Description**

**The importance to the Resource:**

Volunteers assist fish hatchery personnel with tours of the facility, spawning operations, egg care, fish culture, Kid's Fishing Day, light maintenance, and cleaning of public facilities.

**The problem:**

Due to continued and anticipated budget and staffing deficits, volunteers have become essential in efficient operation of the hatchery and for informing publics of the hatchery, regional and agency missions.

**The objective:**

Quinault National Fish Hatchery welcomes approximately 3,500 tourists annually. The staff and, primarily volunteers, offer and conduct tours, provide outreach materials and structures in order to accommodate the visiting public.

**The method:**

Station volunteers are recruited, interviewed and invited to participate in daily outreach activities at the facility. Their primary roles is to provide quality visits to the public via tours and information. Volunteers also maintain areas accessed by the public, restrooms, gardens and brochures.

13250-A-019 - [Fall Chinook Salmon Production](#)

<b>Facility</b>	Quinault National Fish Hatchery	<p><b>Accomplishment Summary</b></p> <p>Brood Year 2005; Quinault National Fish Hatchery reared and released 251,870 Fall Chinook salmon into Cook Creek on the Quinault Indian Reservation.</p> <p><b>Description</b></p> <p><b>The importance to the Resource:</b></p> <p>Cook Creek Fall Chinook salmon contribute to restoration of returning salmon to the Quinault River and its tributaries, providing important commercial, sport and subsistence fisheries to tribal members of the Quinault Indian Nation.</p> <p><b>The problem:</b></p> <p>Quinault NFH's Chinook salmon program was initiated in response to the low returns of adult salmon to the region beginning in the early 70's, due primarily to overfishing, habitat degradation and poor ocean survival conditions.</p> <p><b>The objective:</b></p> <p>As part of Quinault NFH's Tribal Trust responsibilities, yearly releases of young fall chinook salmon within the Quinault Reservation help to rebuild to harvestable levels, maintain or supplement runs of this unique species in order to maintain adequate harvest levels.</p> <p><b>The method:</b></p> <p>During FY06, 251,870 BY05 fry were released in Cook Creek, a tributary of the Quinault River of the Quinault Indian Reservation.</p>
<b>Expended</b>	\$54651	
<b>Objective</b>	Restore declining fish and other aquatic resource populations before they require listing under the Endangered Species Act.	
<b>Primary Benefited Species</b>	Chinook salmon or king salmon ( <a href="#">Oncorhynchus tshawytscha</a> )	
<b>Primary Benefited Population</b>	Not specified	
<b>Plans</b>	Quinault NFH Cooperative Agreement	
<b>Keyword</b>	Tribal	
<b>Need Number</b>	N-002	
<b>Partners</b>		
<b>Accomplishments</b>		
Number of Fishery Management Plan production tasks implemented (PART)	1	
number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)	1	
Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation	1	
Number of consultations conducted to support Tribal fish & wildlife conservation.	1	

**13250-A-020 - [Egg Isolation Unit to Produce Chinook for Agreement with the Quinault Indian Nation](#)**

<b>Facility</b>	Quinault National Fish Hatchery
<b>Expended</b>	\$14635
<b>Objective</b>	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.
<b>Primary Benefited Species</b>	Chinook salmon or king salmon ( <a href="#">Oncorhynchus tshawytscha</a> )
<b>Primary Benefited Population</b>	Not specified
<b>Plans</b>	Quinault NFH Cooperative Agreement
<b>Keyword</b>	Fish Health
<b>Need Number</b>	N-002
<b>Partners</b>	Quinault Indian Nation (\$960)

**Accomplishments**

Number of Fishery Management Plan production tasks implemented (PART)	1
Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation	1
Number of applied aquatic scientific and technologic tools shared with partners.	1

**Accomplishment Summary**

Modifications to Ultra Violet (UV) water treatment system. Funding was applied to add additional UV treatment to the water used to incubate Chinook eggs from Lake Quinault. Treatment ensures that the eggs are incubated on pathogen free water.

**Description**

**The importance to the Resource:**

The incubation of salmonid eggs from outside of the Cook Creek drainage requires special handling in order to prevent the spread of fish pathogens (diseases).

**The problem:**

Chinook eggs from Quinault Lake are collected but may be carrying undesirable viruses. Fish health samples are taken and tested to check for pathogens. The eggs are incubated separate from normal fish production eggs.

**The objective:**

Isolate eggs until Fish Health reports are generated. The isolation will stop the spread of undesirable pathogens to normal fish production eggs/fish.

**The method:**

Isolate eggs in Egg/Iso quarantine building until Fish Health results are obtained. Return eggs to source if eggs are determined to be unfit.

13250-A-021 - [Hoh River Steelhead Distribution Program](#)

<b>Facility</b>	Quinault National Fish Hatchery
<b>Expended</b>	\$5555
<b>Objective</b>	Provide fish for Tribal resource management.
<b>Primary Benefited Species</b>	Rainbow trout ( <a href="#">Oncorhynchus mykiss</a> )
<b>Primary Benefited Population</b>	Not specified
<b>Plans</b>	Quinault NFH Cooperative Agreement
<b>Keyword</b>	Tribal
<b>Need Number</b>	N-002
<b>Partners</b>	Hoh Indian Nation Quinault Indian Nation

**Accomplishments**

Number of Fishery Management Plan production tasks implemented (PART)	2
number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)	1
Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation	1
Number of consultations conducted to support Tribal fish & wildlife conservation.	1

**Accomplishment Summary**

Distributed 50,381 Steelhead yearlings to Chalaat Creek (a tributary of the Hoh River) on February 15, 2006. Distributed 59,926 Steelhead yearling smolts at Allen's bar on the Hoh River.

**Description**

**The importance to the Resource:**

Distribution of Steelhead Yearling smolts contribute to the commercial, subsistence and sport fishing activities of the Hoh Indian Nation.

**The problem:**

The Hoh Nation does not have the infrastructure to supplement steelhead runs in the Hoh River for commercial, subsistence and sport fishing activities.

**The objective:**

The program is in place to produce adult Steelhead trout in the Hoh River.

**The method:**

Rear and distribute 100,000 Steelhead yearling smolts into the Hoh River drainage.

13320-A-033 - [Coho Production Density Study - Quinault NFH](#)

<b>Facility</b>	Western Washington Fisheries Resource Office
<b>Expended</b>	\$24987
<b>Objective</b>	Support, facilitate, and/or lead collaborative approaches to manage interjurisdictional fisheries.
<b>Primary Benefited Species</b>	Coho salmon or silver salmon ( <a href="#">Oncorhynchus kisutch</a> )
<b>Primary Benefited Population</b>	Not specified
<b>Plans</b>	Quinault NFH Cooperative Agreement
<b>Keyword</b>	Fish Technology
<b>Need Number</b>	N-002
<b>Partners</b>	Quinault Indian Nation

**Accomplishments**

Number of other Fishery Management Plan tasks implemented for populations of management concern.	1
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**Accomplishment Summary**

Tag recoveries of coho salmon adults from the final broodyear of this study have been completed and reported to the coastwide tag recovery database. Analysis of complete survival data from ocean fisheries, local terminal fisheries, and returns to the hatchery is continuing on schedule, with final analysis expected during FY 2007.

**Description**

**The importance to the Resource:**

This project will assess whether reducing coho salmon production at Quinault NFH yields the same fishery benefits as higher levels of fish production, thus avoiding potential disease problems at the hatchery as well as lowering production costs.

**The problem:**

Rearing density of coho salmon was recently cut at Quinault NFH because of high levels of disease. Disease levels are now lower, but it is unknown if survival has increased to compensate for the reduced production.

**The objective:**

This project will evaluate production protocols for coho salmon at Quinault NFH to determine production levels that most benefit Tribal, recreational, and commercial fishers of coastal Washington. Other related studies were conducted in different rearing environments and had low statistical power.

**The method:**

Tag recoveries of coho adults from the final broodyear of this study were completed and

	<p>reported to the coastwide tag recovery database. Analysis of complete survival data from ocean fisheries, local terminal fisheries, and returns to the hatchery is continuing on-schedule.</p>
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13265-A-006 - [Production and Distribution of Coho salmon](#)

<b>Facility</b>	Winthrop National Fish Hatchery	<p><b>Accomplishment Summary</b></p> <p>Reared and released 311,000 yearling Coho salmon into the Methow River (tributary to the Columbia River). Produced 310,000 Coho salmon eggs from 354 returning adult salmon for use in Coho salmon production and distribution at Winthrop NFH.</p> <p><b>Description</b></p> <p><b>The importance to the Resource:</b></p> <p>Assisting the Yakama Nation with the reintroduction of Coho to the mid-Columbia River basin is important because it supports recovery of a functionally extirpated salmonid species and meets tribal trust responsibilities.</p> <p><b>The problem:</b></p> <p>Indigenous natural Coho salmon were decimated in the early 1900s and no longer occupy the mid-Columbia river basins. Reasons for decline include the construction and operation of mainstem Columbia River hydropower projects, habitat degradation, release locations, harvest management, and hatchery practices.</p> <p><b>The objective:</b></p> <p>The objective is to assist, primarily, the Yakama Nation and other partners in re-establishing naturally spawning Coho populations in mid-Columbia tributaries to biologically sustainable levels which provide significant harvest in most years.</p> <p><b>The method:</b></p> <p>Assist the Yakama Nation with the mid-Columbia Coho reintroduction feasibility project by providing facilities, resources, manpower</p>					
<b>Expended</b>	\$0						
<b>Objective</b>	Recognize and promote the Service's distinct obligations toward Tribes within the Fisheries Program.						
<b>Primary Benefited Species</b>	Coho salmon or silver salmon ( <a href="#">Oncorhynchus kisutch</a> )						
<b>Primary Benefited Population</b>	<a href="#">Methow River Coho</a>						
<b>Plans</b>	The Service's Native American Policy 2005-2007 Interim Management Agreement for Upriver Chinook, Sockeye, Steelhead, Coho, and White Sturgeon						
<b>Keyword</b>	Tribal						
<b>Need Number</b>	N-002						
<b>Partners</b>	Bonneville Power Administration (\$50000) Yakama Indian Nation						
<p><b>Accomplishments</b></p> <table border="1"> <tr> <td>Number of Fishery Management Plan production tasks implemented (PART)</td> <td>2</td> </tr> <tr> <td>number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)</td> <td>2</td> </tr> <tr> <td>Number of other Fishery Management Plan</td> <td>4</td> </tr> </table>			Number of Fishery Management Plan production tasks implemented (PART)	2	number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)	2	Number of other Fishery Management Plan
Number of Fishery Management Plan production tasks implemented (PART)	2						
number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)	2						
Number of other Fishery Management Plan	4						

tasks implemented for populations of management concern.

and technical expertise.

**Further description:**

Coho salmon have been extirpated from the Mid-Columbia basin for almost half a century. The Yakama Nation, in cooperation with the Bonneville Power Administration, U.S. Fish and Wildlife Service, and additional state and federal agencies initiated a Coho salmon Reintroduction Feasibility Project in 1999. The Winthrop National Fish Hatchery plays an integral role in the reintroduction project. The U.S. Fish and Wildlife Service-Winthrop National Fish hatchery has a cooperative agreement with the Yakama Nation to rear and release 250,000 Coho salmon in specified areas of the Mid-Columbia Basin. Up to 250,000 additional Coho salmon may be transported in to Winthrop NFH for short term acclimation and release.